



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2} [help]

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps
of Engineers
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

Part 1—Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]

Replacement and Reorientation of Existing Deepwater Bay -Site 2 Floating Salmon Net Pen Aquaculture Structure and Moorings

Part 2—Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Middle)

[REDACTED]

2b. Organization (If applicable)

Cooke Aquaculture Pacific, LLC

2c. Mailing Address (Street or PO Box)

[REDACTED]

2d. City, State, Zip

Anacortes, WA, 98221

2e. Phone (1)

[REDACTED]

2f. Phone (2)

[REDACTED]

2g. Fax

360.293.0558

2h. E-mail

[REDACTED]

¹ Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx>.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

² To access an online JARPA form with [help] screens, go to

http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

RECEIVED

FEB 07 2017

State Department
of Ecology (SWRO)

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)			
3b. Organization (If applicable)			
3c. Mailing Address (Street or PO Box)			
3d. City, State, Zip			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both upland and aquatic ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- ☐ Same as applicant. (Skip to Part 5.)
- ☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- ☐ There are multiple upland property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.
- ☒ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete JARPA Attachment E to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
Josh Peters, DNR District Manager-Straits			
4b. Organization (If applicable)			
Washington State Department of Natural Resources (see JARPA Attachment E)			
4c. Mailing Address (Street or PO Box)			
Orca Straits District, 5310 Eaglemount Road			
4d. City, State, Zip			
Chimacum, WA 98325			
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- ☐ There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [\[help\]](#)

- ☐ Private
- ☐ Federal
- ☐ Publicly owned (state, county, city, special districts like schools, ports, etc.)
- ☐ Tribal
- ☒ Department of Natural Resources (DNR) – managed aquatic lands (Complete [JARPA Attachment E](#))

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [\[help\]](#)

The project area is located on the east side of Cypress Island within Deepwater Bay and adjacent to Bellingham Channel in Skagit County. The project property is sub-tidal aquatic lands leased by the Department of Natural Resources (DNR) to Cooke Aquaculture Pacific, LLC under DNR aquatic lands lease #20-B12157.

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [\[help\]](#)

Near Anacortes, WA 98221

5d. County [\[help\]](#)

Skagit County

5e. Provide the section, township, and range for the project location. [\[help\]](#)

¼ Section	Section	Township	Range
	4	35N	1E

5f. Provide the latitude and longitude of the project location. [\[help\]](#)

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

48.33256 N lat. / -122.41057 W long.

5g. List the tax parcel number(s) for the project location. [\[help\]](#)

- The local county assessor's office can provide this information.

The subtidal aquatic lands are owned by the State of Washington and managed by WDNR. The applicant is unaware of tax parcel numbers for the subject property.

5h. Contact information for all adjoining property owners. (If you need more space, use [JARPA Attachment C.](#)) [\[help\]](#)

Name	Mailing Address	Tax Parcel # (if known)
There are no other adjoining property owners within 1,000 feet other than DNR.		

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5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

There are no wetlands on or adjacent to the project location. The project is located over subtidal aquatic land.

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

Bellingham Channel, Deepwater Bay.

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

☐ Yes ☒ No ☐ Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

The surrounding shorelines and uplands of Cypress Island and Deepwater Bay adjacent to the project area are primarily owned by the State of Washington and managed by the Department of Natural Resources (DNR). The adjacent upland forested areas were commercially logged 50 to 75 years ago and left relatively undisturbed since that time. The uplands have regrown into a Pacific NW temperate forest consisting primarily of coniferous trees, mixed deciduous trees and typical undergrowth vegetation on a steeply sloped, rocky terrain.

The nearest shoreline to the offshore project area consists of a large rock wall, boulders and cobble rock. The Deepwater Bay area has a strong tidal gyre which forms a deep water channel running parallel to the shorelines of Deepwater Bay. The existing floating net pen structure and mooring equipment is located in water that ranges from 75 feet to 100 feet deep. There is no marine vegetation in the project location because depths are beyond the photic zone. The benthic environment underneath and adjacent to the net pens varies from cobble and coarse sand, to silt and shell clutter.

5m. Describe how the property is currently used. [\[help\]](#)

The facility is used as a commercial marine finfish aquaculture net pen facility that has been in operation since 1985. The existing net pen structure has a surface area of approximately 1.84 acres and consists of a grid of hinged floating steel walkways. There are a total of ten individual fish cages (2 rows of 5 cages) located within the existing Site 2 floating steel net pen structure. Juvenile salmon are transported by boat from the company's private freshwater hatchery and entered into the marine net pens. The juvenile fish weigh an average of 100 grams each when they are entered into the marine fish pens from the hatchery. Each pen is stocked with a distinct number of fish that can be grown to harvest size. The juvenile fish are fed and raised in the net pens for approximately 14 to 18 months until they reach a harvestable size of 10 to 12 pounds on average. The salmon are harvested from the pens, transported to a fish processing plant, cleaned, packaged and distributed to seafood buyers throughout the United States. The facility will harvest the entire generation of fish off the site and the net pen facility will remain empty (fallow) for a minimum of 8 weeks before the next generation of juvenile fish are entered into the pens.

There are three (3) separate net pen facilities located within Deepwater Bay (Sites 1, 2 and 3) that are all owned and operated by Cooke Aquaculture Pacific (see Sheet 1 of attached JARPA drawings). Normal activities at the sites include feeding and caring for the fish stocks; maintenance of equipment, structures and fish containment nets; and re-supplying the site with fish feed and other items necessary for the day to day operations.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

The adjacent properties are undeveloped uplands owned by the State of Washington. Some of the uplands of Cypress Island are designated Natural Resource Lands by Skagit County and are designated a Natural Reserve Area by DNR. The Skagit County shoreline environment designation of adjacent shorelines is Conservancy. The upland property adjacent to the fish pen structure is steeply sloped shoreline, with a rock wall and large boulders. Cypress Island is only accessible by private boat. Public use of the adjacent shoreline is infrequent because the steep, rocky terrains make it difficult to land recreational vessels. Recreational and commercial boating and fishing occur in the adjacent waters of Deepwater Bay and Bellingham Channel area.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

Existing structures:

The current net pen structure moored at the Site 2 location is a floating steel raft, containing a total of 10 individual cages (2 rows of 5 cages). Each individual fish containment cage measures approximately 80 feet by 80 feet square at the surface. Each individual fish cage is surrounded by a grated steel walkway measuring approximately 7 feet in width. The walkways are interconnected at hinged joints that form a floating rectangular grid (see attached JARPA drawings). The total structure measures approximately 183 feet wide by 438 feet long around the outside perimeter (approximately 80,154 sq. ft.). The structure is made of a hinged steel frame work of metal walkways with numerous plastic floatation billets (floats) attached to each walkway.

The floating walkways are anchored to the seafloor with large steel Danforth-type anchors that are placed around the perimeter of the cage system and tightly tensioned. The 2 inch diameter polypropylene anchor lines are attached at specific mooring points around the outside perimeter of the cage walkways using steel shackles, chain and mooring hardware. The anchors weigh from 3,000 to 6,000 pounds each.

The floating walkway structure allows fish containment nets to be installed in each of the ten fish pens and enable farm employees to monitor, feed and perform the routine daily activities involved in commercial finfish aquaculture. The cultivated salmon are raised in very heavy gauged fish containment nets that are attached and suspended from the surface by the floating steel net pen structures. The containment nets are held tightly in place below the surface by a heavy steel pipe weighting system. The net weighting system is attached to the bottom of the net wall around the perimeter of each fish pen which maintains the fish containment nets in their square shape.

Current condition:

The current condition of the existing fish pen structure can be described as "used and nearing the end of serviceable life." The existing steel net pen structure has been in service for approximately 16 years in the marine environment and is due for complete replacement. Corrosion on the metal walkway grating and substructures is beginning to accelerate. The metal hinge joints in some areas are showing signs of excess wear. Complete replacement of the floating steel net pen structure with a newly manufactured one is considered a "best management practice" for the safe containment of the cultured fish stocks and a method of routine maintenance by the marine aquaculture industry. The fish containment nets have been replaced several times over the past 16 years. New containment nets were purchased in 2016 and installed for the current generation of fish being raised at the Cypress facilities. The new containment nets have a useful life expectancy of six (6) years before they are retired from service and recycled. New nets are purchased and typically installed during the following period between generations at the fish pens. There are 22 Danforth-type anchors deployed around the perimeter of the net pen structure. The anchors will be reused. The used anchor line, worn chain and steel hardware items will be replaced with new anchoring and mooring materials.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

The site is located within Deepwater Bay, adjacent to Bellingham Channel and is only accessible by boat (see attached JARPA drawings). Boat transportation from Anacortes is available.

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

The proposed project involves the repair and maintenance of an existing floating steel net pen structure by complete replacement using a newly manufactured floating steel net pen structure of similar design and size. During the removal of the existing structure and the replacement with a new net pen structure, the new structure will be re-positioned to align it with the prevailing tidal currents at the site (see attached JARPA drawings). The existing anchors and mooring components will be lifted to the surface, refit with new lines and steel hardware, and then redeployed into new positions that correspond with the new orientation.

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

Periodic replacement of the existing net pen structure with a newly manufactured structure is necessary in order to maintain a safe working platform for the farm employees and to ensure the safe containment of the cultivated fish stocks at the facility. The existing steel net pen structure has been in service for approximately 16 years in the marine environment and is due for complete replacement. Steel net pen systems located in the marine environment are subject to the corrosive effects of salt water and to metal fatigue from the constant wave energy, storm events and the extreme forces that are exerted on them from tidal currents. The corrosion on the metal walkway grating and substructures is accelerating and some metal hinge joints show signs of excess wear. Repairing the rusted steel walkways and replacing fatigued metal components of the existing cage system structure in place is not cost effective or practical.

At the time of replacement, the new floating net pen structure will be reoriented and re-anchored in a new position within the existing DNR aquatic lands lease area. Repositioning the floating pens is necessary to align the narrow ends of the farm to the prevailing currents at the site. This new orientation will substantially reduce the drag loads exerted on the fish containment nets, the mooring points and the net pen structure, and will improve the overall safety of the operation as well as the improve the cultivation environment for the reared fish stocks.

The project will replace and re-orient an existing net pen aquaculture facility with a new similar designed structure that consists of floating walkways, anchors, mooring lines and mooring buoys. The proposed project will not substantially change the overall dimensions of the existing fish pen structure or the current operations and activities of the facility.

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- | | | | | |
|---|--|--|---|---------------------------------------|
| <input type="checkbox"/> Commercial | <input type="checkbox"/> Residential | <input type="checkbox"/> Institutional | <input type="checkbox"/> Transportation | <input type="checkbox"/> Recreational |
| <input checked="" type="checkbox"/> Maintenance | <input type="checkbox"/> Environmental Enhancement | | | |

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

- | | | | |
|---|---|--|--|
| <input checked="" type="checkbox"/> Aquaculture | <input type="checkbox"/> Culvert | <input type="checkbox"/> Float | <input type="checkbox"/> Retaining Wall (upland) |
| <input type="checkbox"/> Bank Stabilization | <input type="checkbox"/> Dam / Weir | <input type="checkbox"/> Floating Home | <input type="checkbox"/> Road |
| <input type="checkbox"/> Boat House | <input type="checkbox"/> Dike / Levee / Jetty | <input type="checkbox"/> Geotechnical Survey | <input type="checkbox"/> Scientific Measurement Device |
| <input type="checkbox"/> Boat Launch | <input type="checkbox"/> Ditch | <input type="checkbox"/> Land Clearing | <input type="checkbox"/> Stairs |
| <input type="checkbox"/> Boat Lift | <input type="checkbox"/> Dock / Pier | <input type="checkbox"/> Marina / Moorage | <input type="checkbox"/> Stormwater facility |
| <input type="checkbox"/> Bridge | <input type="checkbox"/> Dredging | <input type="checkbox"/> Mining | <input type="checkbox"/> Swimming Pool |
| <input type="checkbox"/> Bulkhead | <input type="checkbox"/> Fence | <input type="checkbox"/> Outfall Structure | <input type="checkbox"/> Utility Line |
| <input type="checkbox"/> Buoy | <input type="checkbox"/> Ferry Terminal | <input type="checkbox"/> Piling/Dolphin | |
| <input type="checkbox"/> Channel Modification | <input type="checkbox"/> Fishway | <input type="checkbox"/> Raft | |

☒ Other: Floating net pen structure and associated mooring equipment

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

Removal of existing net pens:

The existing net pens at Site 2 will be harvested out and empty of fish as part of the normal production cycle. All of the fish containment nets will be removed from the facility and transported to an upland facility for repair and maintenance. The floating steel net pen structure will then be detached from the surface mooring points and towed away using a tug boat to a local shipyard as a single unit. The steel cage system components will be dismantled at a shipyard by removing the hinge pin connections between each walkway section and lifting the individual walkway sections onto the shore facility using a crane. The walkway sections will be stacked at an appropriate upland facility for further dis-assembly, transportation and eventual disposal or recycling at an appropriate, permitted facility.

Removal of existing moorings:

A crane barge will be towed to the project area by tug boat and work skiffs. The crane barge will be used to remove the existing anchors, mooring lines and associated anchoring hardware. The barge will be positioned above each anchor using a tug boat. Anchors will be lifted vertically from the sea floor and placed on the deck of the barge. The used polypropylene mooring lines will be collected and disposed of at a land-based waste handling facility. Used steel hardware and chain not suitable for re-use will be collected and transported to a metal recycling facility. Anchors will be refit with new mooring line and anchoring hardware for reuse with the new (replacement) cage structure mooring system. Several anchors will be pre-positioned in designated positions around the perimeter of the new site location prior to the arrival of the new net pen structure.

Installation work will be performed using various support vessels and work vessels to position the crane barge and assist in repositioning the anchors. The mooring lines, chains and shackles will all be connected to the anchors prior to re-placement of the anchors into position on the seafloor. Mooring lines will be attached to buoys at the water surface. The new anchors will be lowered to the bottom in designated locations and set into place. The anchors will form a mooring system around the outside perimeter of the net pen structure, and will allow the new replacement net pen structure to be quickly attached at the surface when it is towed into position.

Installation of new net pen structure:

The pre-assembled new net pen structure will be towed into place using a tug boat and attached to the pre-positioned moorings. Once the mooring lines are tensioned and the new structure is in the correct position, any remaining anchors will be deployed according to the mooring specifications of the cage manufacturer.

Primary equipment to be used:

Tug boats, support vessels and work skiffs will be utilized along with a crane barge to reposition anchors and provide a working platform to carry out the necessary repair and maintenance of the anchoring equipment with new hardware and lines. Small hand tools and metal cutting torches or welding tools will also be used during disassembly and anchor equipment maintenance work.

The proposed project area is the current location of the existing Site 2 net pen structure within Deepwater Bay adjacent to Bellingham Channel. None of the above work will be performed within the 100-year flood plain.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start Date: September 2017

End Date: January 2017

☐ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

Approximately \$1,400,000

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- If yes, list each agency providing funds.

☐ Yes ☒ No ☐ Don't know

Part 7–Wetlands: Impacts and Mitigation

☐ Check here if there are wetlands or wetland buffers on or adjacent to the project area.

(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [\[help\]](#)

☒ Not applicable

7b. Will the project impact wetlands? [\[help\]](#)

☐ Yes ☐ No ☐ Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

☐ Yes ☐ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- If Yes, submit the report, including data sheets, with the JARPA package.

☐ Yes ☐ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- If Yes, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☐ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- If Yes, submit the plan with the JARPA package and answer 7g.
- If No, or Not applicable, explain below why a mitigation plan should not be required.

☐ Yes ☐ No ☐ Don't know

N/A

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

N/A

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)
N/A						

¹ If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report. ² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package. ³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable. ⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)						
Page number(s) for similar information in the mitigation plan, if available: _____						
7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]						
N/A						
7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]						
N/A						

Part 8—Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [\[help\]](#)

☐ Not applicable

A number of measures are taken in the design and planning of the project to avoid and minimize potential impacts. Appropriate best management practices (BMPs) shall be employed to prevent deleterious material from entering the aquatic environment during the proposed work. All in-water work will be completed within the in-water work window authorized by the Washington Department of Fish & Wildlife (WDFW) for this area. In addition, work vessels will observe Federal regulations that implement a no-approach zone for killer whales and all other whales, dolphins, and porpoises when operating vessels approaching or leaving the project area. The cultured fish stocks in the existing net pen facility will be harvested out prior to the planned replacement project to reduce the risk of accidental fish escapement. The fish containment nets will be removed from the water and transported to a permitted upland facility prior to towing the fish pens to eliminate any risk of wildlife entanglement. The net weighting system will also be lifted to the surface and removed prior to movement of the structure. Any non-essential equipment located on the walkways will be removed prior to towing the pen structure to eliminate the potential loss of equipment overboard while the structure is being moved.

Phase 1 - Existing anchoring equipment removal, refitting and re-deployment.

Overwater anchor removal, refit and re-deployment work will be performed using a crane barge and support vessels that will retrieve the anchoring equipment. The operation will occur in waters ranging from 80 to 95 feet deep. The crane barge will be held in position by a tug boat and/or utilizing the existing net pen moorings at the site. The barge will be used in a manner that the hull will never ground and/or require the use of the barge mooring spuds to hold it in position while performing the anchor maintenance work. Anchors will be lifted vertically to the surface to minimize disturbance to the substrate. The mooring lines, chain and anchors will be placed onto the deck of the crane barge or other support vessels involved in the project. All materials removed during the anchor work will be either disposed of at a permitted upland waste collection or recycling facility.

The steel anchors will be refitted with new mooring line, new chain and associated mooring hardware for redeployment and re-use in the new mooring grid for the replacement cage structure. This process will be carried out in a manner designed to minimize disturbance to the sediments around each anchor by vertically lifting and lowering them into place. The refit anchors will be lowered into the new positions utilizing the new mooring lines and set into the new locations.

Old and used mooring lines and chains will be transported to a marine terminal for offloading, disposal and recycling. The old mooring lines will be placed in a roll-off garbage receptacle and transported by truck to an approved upland waste disposal facility. Used and retired anchor chains and steel hardware will be loaded in metal recycling bins for transport by truck to a recycling collection facility. The crane barge and associated work vessels will utilize BMPs, spill prevention plans and spill response procedures designed to reduce the risk of deleterious materials from entering the environment. Oil spill response and containment kits will be kept onboard the work vessels and be readily available during work at the site. Anchor removal and redeployment work will be efficiently coordinated to minimize the duration of work to approximately 7 to 10 days.

Phase 2 - Old net pen structure removal and new replacement net pen deployment.

The existing net pen structure will be detached from the mooring points and towed by a tug boat as a single unit to an existing shipyard for disassembly and decommissioning. Towing the structure from the project area will substantially reduce the amount overwater work that is performed in the project area. After the fish containment nets and net weighting system are removed, the only objects remaining in the water will be the walkway floatation billets (plastic floats). The depth of these floats will be approximately eighteen to twenty-four inches (18" to 24") below the water surface. Towing the floating net pen structure at this time is comparable to towing a log raft. When the fish containment nets are removed, the net pen structure (floating walkways) becomes a large rectangular floating grid with very shallow draft.

The new replacement net pen structure will be towed by a tug boat as a single unit to the net pen site and attached into the mooring grid. Once the new net pens are in the proper position, final adjustments to the anchor lines can occur and the deployment of any remaining mooring equipment will be made to secure the structure in place. Work vessels and contractors will utilize spill prevention plans, BMPs and standard operating procedures (SOPs) to prevent accidental spills of petroleum products. Oil spill response and containment kits will be kept on the vessels and barge at all times.

Existing sediment station closure monitoring.

A third-party contractor will be hired to perform the necessary sediment station closure sampling and reporting to Ecology and DNR under the existing Section 402 NPDES Waste Discharge permit for the Cypress Island Site 2 fish pen facility. This work will be carried out after the facility has been repositioned and during the summer sampling months as required by the NPDES permits. Closure monitoring is designed to verify that the "closed" sediment sampling station meets the Washington State marine net pen sediment management standards. New sediment sampling stations will be established that are relative to the new orientation of the net pens. The NPDES permit establishes a sediment sampling station located on each of the four sides of a floating net pen structure at a distance of 100 feet from the walkway perimeter. The sediment sampling stations are routinely tested and are required to meet the sediment standards as prescribed in the facility NPDES permit.

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

☒ Yes ☐ No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [\[help\]](#)

- If Yes, submit the plan with the JARPA package and answer 8d.
- If No, or Not applicable, explain below why a mitigation plan should not be required.

☐ Yes ☒ No ☐ Don't know

Mitigation measures proposed by Cooke Aquaculture Pacific for the protection of water quality and sediment quality described in the response to JARPA Question 8a, above constitute the mitigation plan for the proposed work. The risk of adverse impact to marine water quality in the site vicinity is extremely low, and project work will be of very limited duration. The marine work vessels and contractors used in the operation will be required to have spill prevention and response plans and incorporate best management practices designed to minimize the risk of deleterious materials entering the water. The work vessels and farm site will have spill containment materials and clean up kits that will be kept near gasoline or diesel-powered machinery working near the water.

Lifting the anchors from the sea floor is expected to cause a localized, short-term increase in suspended sediments in the immediate vicinity of each anchor as it is pulled to the surface. Strong tidal currents within Deepwater Bay are expected to quickly disperse and reduce the localized suspension of marine sediments in the water column.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

N/A

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Removal and redeployment of anchors and mooring equipment.	Deepwater Bay	Deepwater Bay	Temporary impact. Approx. 2 hours per anchor to lift to surface, refit and redeploy anchor.	None	The sediment disturbed by the removal and resetting of anchors will be minimal and quickly dispersed by tidal currents.

¹ If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.

² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [\[help\]](#)

N/A. No fill materials will be used to implement the project.

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [\[help\]](#)

N/A. The project does not involve excavating or dredging activities.

Part 9—Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [\[help\]](#)

Agency Name	Contact Name	Phone	Most Recent Date of Contact
Skagit County Planning and Development Services	Ms. Betsy Stevenson		01/09/17
Washington Department of Natural Resources	Mr. Sean Carlson		01/25/17
Washington Department of Ecology	Mr. Gary Lee		01/30/17
U.S. Army Corps of Engineers	Pam Sanquineti		01/05/17

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [\[help\]](#)

- If Yes, list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: <http://www.ecy.wa.gov/programs/wq/303d/>.

☐ Yes ☒ No

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [\[help\]](#)

- Go to <http://cfpub.epa.gov/surf/locate/index.cfm> to help identify the HUC.

17110002

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/water/wria/index.html> to find the WRIA #.

WRIA # 03

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/programs/wq/swqs/criteria.html> for the standards.

☒ Yes ☐ No ☐ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [\[help\]](#)

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

☐ Urban ☐ Natural ☒ Aquatic ☐ Conservancy ☐ Other:

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to <http://www.dnr.wa.gov/forest-practices-water-typing> for the Forest Practices Water Typing System.

☒ Shoreline ☐ Fish ☐ Non-Fish Perennial ☐ Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- If No, provide the name of the manual your project is designed to meet.

☒ Yes ☐ No

Name of manual: _____

9i. Does the project site have known contaminated sediment? [help]

- If Yes, please describe below.

☐ Yes ☒ No

9j. If you know what the property was used for in the past, describe below. [help]

The project area and associated commercial finfish net pen facility has been in existence on this property since 1985.

9k. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- If Yes, attach it to your JARPA package.

☐ Yes ☒ No

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

Marbled murrelet *Brachyramphus marmoratus marmoratus*; Killer whale *Orcinus orca*; Humpback whale *Megaptera novaenglia*; Bull Trout *Salvelinus confluentus*; Dolly Varden *Salvelinus malma*; Chinook Salmon *Oncorhynchus tshawytscha*; Steelhead *Oncorhynchus mykiss*; Bocaccio *Sebastes paucispinis*; Canary Rockfish *Sebastes pinniger*; Yelloweye Rockfish *Sebastes ruberrimus*; Eulachon *Thaleichthys pacificus*; Green Sturgeon *Acipenser medirostris*.

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

Bald eagle *Haliaeetus eucocephalus*; Dungeness Crab *Metacarcinus magister*; Pinto abalone *Haliotis kamtschatkana*; Estuarine and Marine Aquatic Habitat; Chinook Salmon (*Oncorhynchus tshawytscha*)

Part 10—SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at <http://apps.oria.wa.gov/opas/>.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.
- For a list of addresses to send your JARPA to, click on [agency addresses for completed JARPA](#).

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☒ A SEPA Checklist was prepared and submitted to Skagit County DCD (lead agency) at the time of the net pen facility permitting in 1984. Shoreline permit #8-84 was issued for the facility by Skagit County. The proposed marine net pen replacement/reorientation project is likely exempt from SEPA as it is considered a repair, remodeling and maintenance of an existing structure activity.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [\[help\]](#)

☒ This project is exempt (choose type of exemption below).

☒ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?
WAC 197-11-800(3)

☐ Other: _____

☐ SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits:

☐ Substantial Development ☐ Conditional Use ☐ Variance

☒ Shoreline Exemption Type (explain): repair/maintenance of existing facility, shoreline permit modification

Other City/County permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☐ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption – Attach Exemption Form

You must submit a check for \$150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. **Do not send cash.**

Check the appropriate boxes

☐ \$150 check enclosed. Check # _____
Attach check made payable to Washington Department of Fish and Wildlife.

☐ My project is exempt from the application fee. (Check appropriate exemption):

☐ HPA processing is conducted by applicant funded WDFW staff.

Agreement # _____

☐ Mineral prospecting and mining

☐ Project occurs on farm and agricultural land.

(Attach a copy of current land use classification recorded with the county auditor, or other proof of current land use)

☐ Project is modification of an existing HPA originally applied for, prior to July 10, 2012.

HPA # _____

Washington Department of Natural Resources:

☒ Aquatic Use Authorization

Complete JARPA Attachment E and submit a check for \$25 payable to the Washington Department of Natural Resources.

Do not send cash.

Washington Department of Ecology:

☒ Section 401 Water Quality Certification

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers):

☐ Section 404 (discharges into waters of the U.S.) ☒ Section 10 (work in navigable waters)

United States Coast Guard permits:

☒ Private Aids to Navigation (for non-bridge projects)

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [\[help\]](#)

11a. Applicant Signature (required) [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Applicant Printed Name

A

Date

2/02/17

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent Printed Name

Authorized Agent Signature

Date

11c. Property Owner Signature (if not applicant) [\[help\]](#)

Not required if project is on existing rights-of-way or easements (provide copy of easement with JARPA).

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner Printed Name

Property Owner Signature

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.



US Army Corps
of Engineers
Seattle District

WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [help]

Attachment E:
Aquatic Use Authorization on
Department of Natural Resources
(DNR)-managed aquatic lands [help]

AGENCY USE ONLY	
Date received: _____	<input type="checkbox"/> Town
<input type="checkbox"/> Application Fee Received; <input type="checkbox"/> Fee N/A	
<input type="checkbox"/> New Application; <input type="checkbox"/> Renewal Application	
Type/Prefix #: _____	Nature Use Code: _____
LM Initials & BP#: _____	
RE Assets Finance BP#: _____	
New Application Number: _____	
Trust(s): _____	County: _____
AQR Plate #(s): _____	
Gov Lot #(s): _____	
Tax Parcel #(s): _____	

Complete this attachment and submit it with the completed JARPA form only if you are applying for an Aquatic Use Authorization with DNR. Call (360) 902-1100 or visit <http://www.dnr.wa.gov/programs-and-services/aquatics/leasing-and-land-transactions> for more information.

- DNR recommends you discuss your proposal with a DNR land manager before applying for regulatory permits. Contact your regional land manager for more information on potential permit and survey requirements. You can find your regional land manager by calling (360) 902-1100 or going to <http://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-districts-and-land-managers-map>. [help]
- The applicant may not begin work on DNR-managed aquatic lands until DNR grants an Aquatic Use Authorization.
- Include a \$25 non-refundable application processing fee, payable to the "Washington Department of Natural Resources." (Contact your Land Manager to determine if and when you are required to pay this fee.) [help]

DNR may reject the application at any time prior to issuing the applicant an Aquatic Use Authorization. [help]

Use black or blue ink to enter answers in white spaces below.

1. Applicant Name (Last, First, Middle)	
Cooke Aquaculture Pacific, LLC	
2. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]	
Replacement and reorientation of existing Deepwater Bay Site 2 Net Pen Structure and Moorings	
3. Phone Number and Email	
[REDACTED] Aquaculture Pacific, LLC [REDACTED]	
4. Which of the following applies to Applicant? Check one and, if applicable, attach the written authority – bylaws, power of attorney, etc. [help]	
<input type="checkbox"/> Corporation <input type="checkbox"/> Limited Partnership <input type="checkbox"/> General Partnership <input checked="" type="checkbox"/> Limited Liability Company Home State of Registration: Washington	<input type="checkbox"/> Individual <input type="checkbox"/> Marital Community (Identify spouse): _____ <input type="checkbox"/> Government Agency <input type="checkbox"/> Other (Please Explain): _____

the 1990s, the number of people in the world who are illiterate has increased from 1.2 billion to 1.5 billion. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015.

1. *Journal of the American Medical Association*, 2000; 283: 2686-2692.

— *Journal of the American Medical Association*, 1997

2013年12月15日 星期一

1. *Phragmites australis* (Cav.) Trin. ex Steud.

1. *Journal of the American Medical Association*, 1997; 277: 1033-1036.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973).

1. *Journal of the American Medical Association*, 1997; 278: 1039-1044.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1601 UV-Visible Spectrophotometer. The concentration of chlorophyll was expressed in $\mu\text{g mL}^{-1}$ of the sample.

100

5. Washington UBI (Unified Business Identifier) number, if applicable: [\[help\]](#)

602-825-648

6. Are you aware of any existing or previously expired Aquatic Use Authorizations at the project location?

☒ Yes ☐ No ☐ Don't know

If Yes, Authorization number(s): #20-B12157

7. Do you intend to sublease the property to someone else?

☐ Yes ☒ No

If Yes, contact your Land Manager to discuss subleasing.

8. If fill material was used previously on DNR-managed aquatic lands, describe below the type of fill material and the purpose for using it. [\[help\]](#)

No fill used. Not applicable.

To be completed by DNR and a copy returned to the applicant.

Signature for projects on DNR-managed aquatic lands:

Applicant must obtain the signature of DNR Aquatics District Manager OR Assistant Division Manager if the project is located on DNR-managed aquatic lands.

I, a designated representative of the Dept. of Natural Resources, am aware that the project is being proposed on Dept. of Natural Resources-managed aquatic lands and agree that the applicant or his/her representative may pursue the necessary regulatory permits. My signature does not authorize the use of DNR-managed aquatic lands for this project.

Printed Name

Dept. of Natural Resources
District Manager or Assistant Division Manager

Signature

Dept. of Natural Resources
District Manager or Assistant Division Manager

Date

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA Publication ORIA-16-016 rev. 10/2016

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Vicinity Map

Wash. Grid Sys. North Zone (NAD83 1991)

Cypress Island

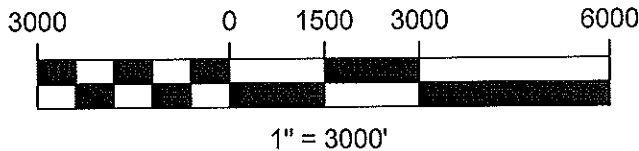
Latitude: 48°33'26"
Longitude: 122°40'46"

Project Area

Bellingham Channel

Guemes Island

The pen system depicted on these pages is a proposed replacement system of an existing system currently within the subject lease limits.



Sidney, B.C. - Anacortes Ferry

San Juan Islands - Anacortes Ferry

Guemes Channel

Anacortes

Fidalgo Island

Anacortes Ferry Terminal



MACLEARNSBERRY, Inc. LAND SURVEYORS CONSULTANTS
1100 NW Thompson Road, Suite 301, Poulsbo, WA 98370 phone: 206 427-0506 www.sealandsurvey.com



REFERENCE: UPI 170544-08-01

APPLICANT: Cooke Aquaculture Pacific LLC

ADJACENT PROPERTY OWNERS:
Washington State

LOCATION: Deepwater Bay, Cypress Island (3.5 miles north of Anacortes Ferry slip)

LAT/LONG: Latitude: 48°33'25" N
Longitude: 122°41'02" W
Section 4, Township 35 North, Range 1 East

PAGE 1 of 6 DATE: February 2, 2017

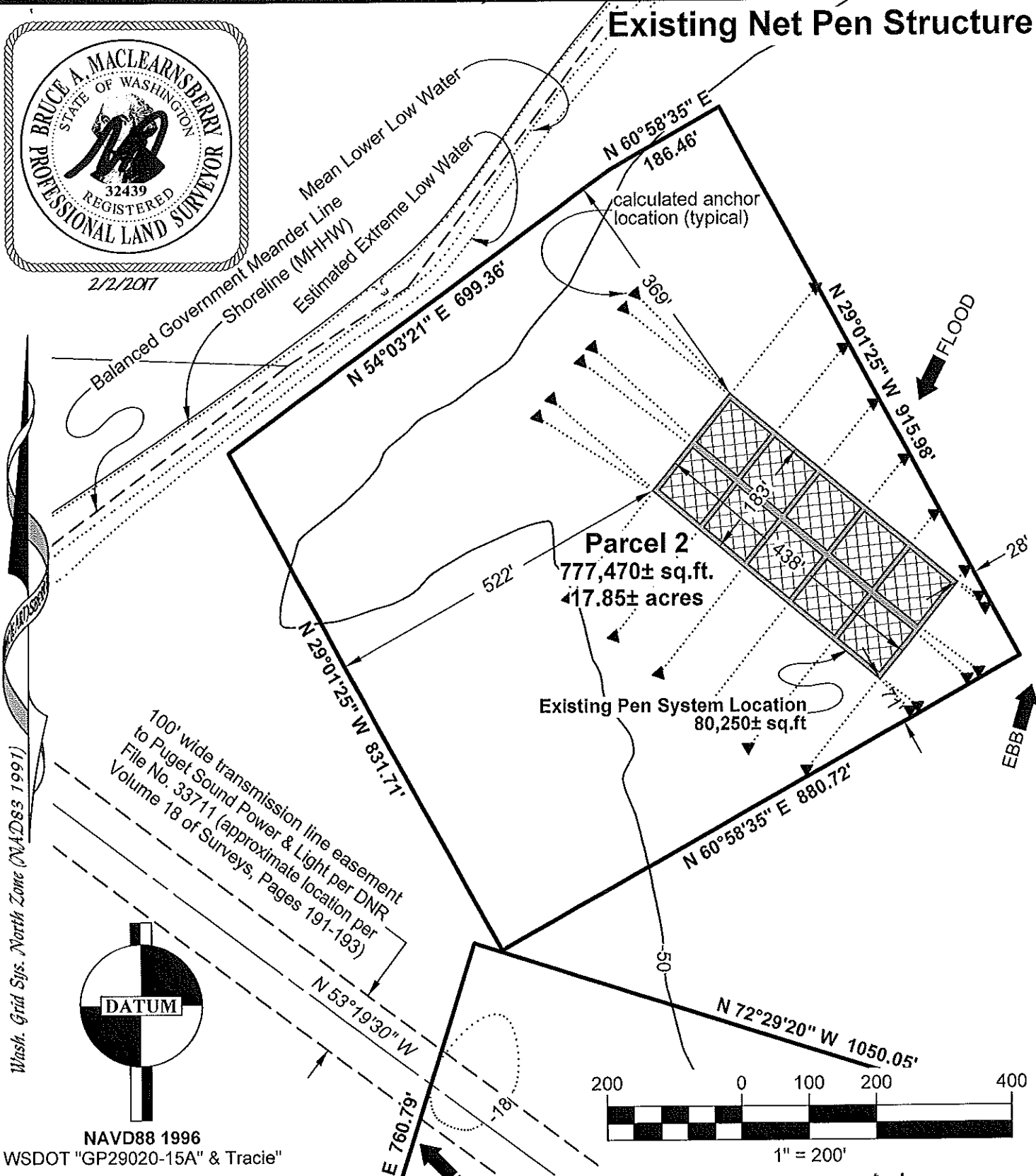
PROPOSED PROJECT: Replacement & Repositioning of Existing Site 2 Net Pen Facility

IN: Deepwater Bay
NEAR/AT: Anacortes
COUNTY: Skagit
STATE: WA



2/2/2017

Existing Net Pen Structure



NAVD88 1996

WSDOT "GP29020-15A" & Tracie"



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PAGE 2 of 6 DATE: February 2, 2017

PROPOSED PROJECT: Replacement & Repositioning of Existing Site 2 Net Pen Facility

IN: Deepwater Bay
NEAR/AT: Anacortes
COUNTY: Skagit
STATE: WA



2/2/2017

Existing Net Pen Structure

438' (TOTAL SYSTEM LENGTH)

anchor (typ.)

Wash. Grid Sys. North Zone (NAD83 1991)



NAVD88 1996
WSDOT "GP29020-15A" & "Tracie"



1" = 40'

anchor line bridle

anchor lines

fish pen

walkway



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East
PAGE 3 of 6 DATE: February 2, 2017

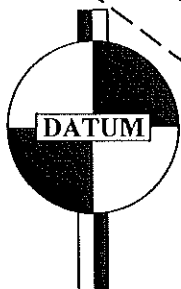
PROPOSED PROJECT: Replacement & Re-
positioning of Existing Site 2 Net Pen Facility

IN: Deepwater Bay
NEAR/AT: Anacortes
COUNTY: Skagit
STATE: WA



Proposed New Replacement Net Pen Structure & Orientation

Wash. Grid Sys. North Zone (NAD83 1991)



NAVD88 1996

WSDOT "GP29020-15A" & Tracie"



MACLEARNSBERRY, INC. LAND SURVEYORS CONSULTANTS

1100 NW Thompson Road, Suite 301, Poulsbo, WA 98370 phone: 206 427-0506 www.sealandsurvey.com



REFERENCE: UPI 170544-08-01

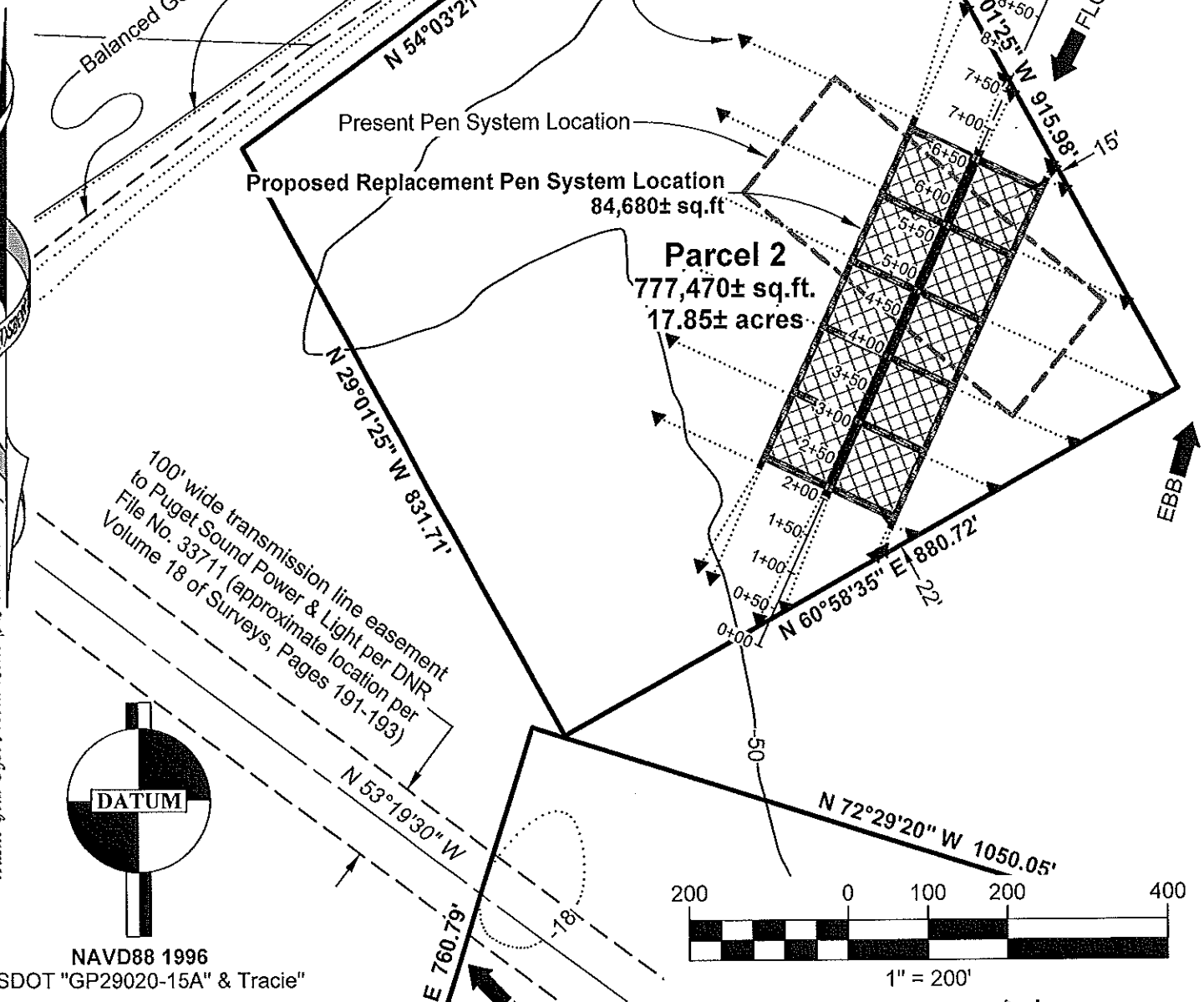
APPLICANT: Cooke Aquaculture Pacific LLC

ADJACENT PROPERTY OWNERS:
Washington State

LOCATION: Deepwater Bay, Cypress Is-
land (3.5 miles north of Anacortes Ferry slip)
LAT/LONG: Latitude: 48°33'25" N
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PAGE 4 of 6 DATE: February 2, 2017

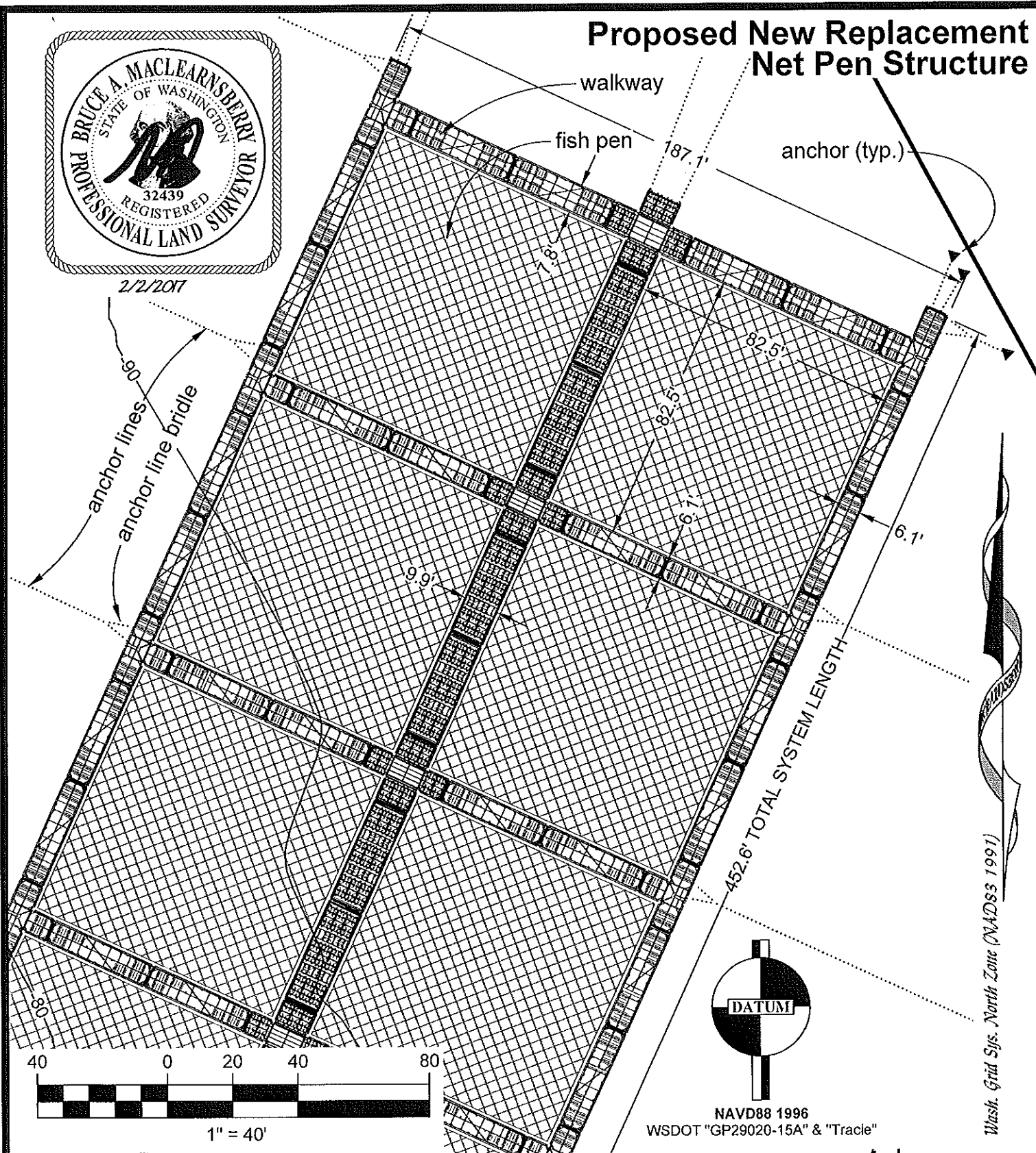
PROPOSED PROJECT: Replacement & Re-
positioning of Existing Site 2 Net Pen Facility

IN: Deepwater Bay
NEAR/AT: Anacortes
COUNTY: Skagit
STATE: WA





Proposed New Replacement Net Pen Structure



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1100 NW Thompson Road, Suite 301, Poulsbo, WA 98370 phone: 206 427-0506 www.sealandsurvey.com



REFERENCE: UPI 170544-08-01

APPLICANT: Cooke Aquaculture Pacific LLC

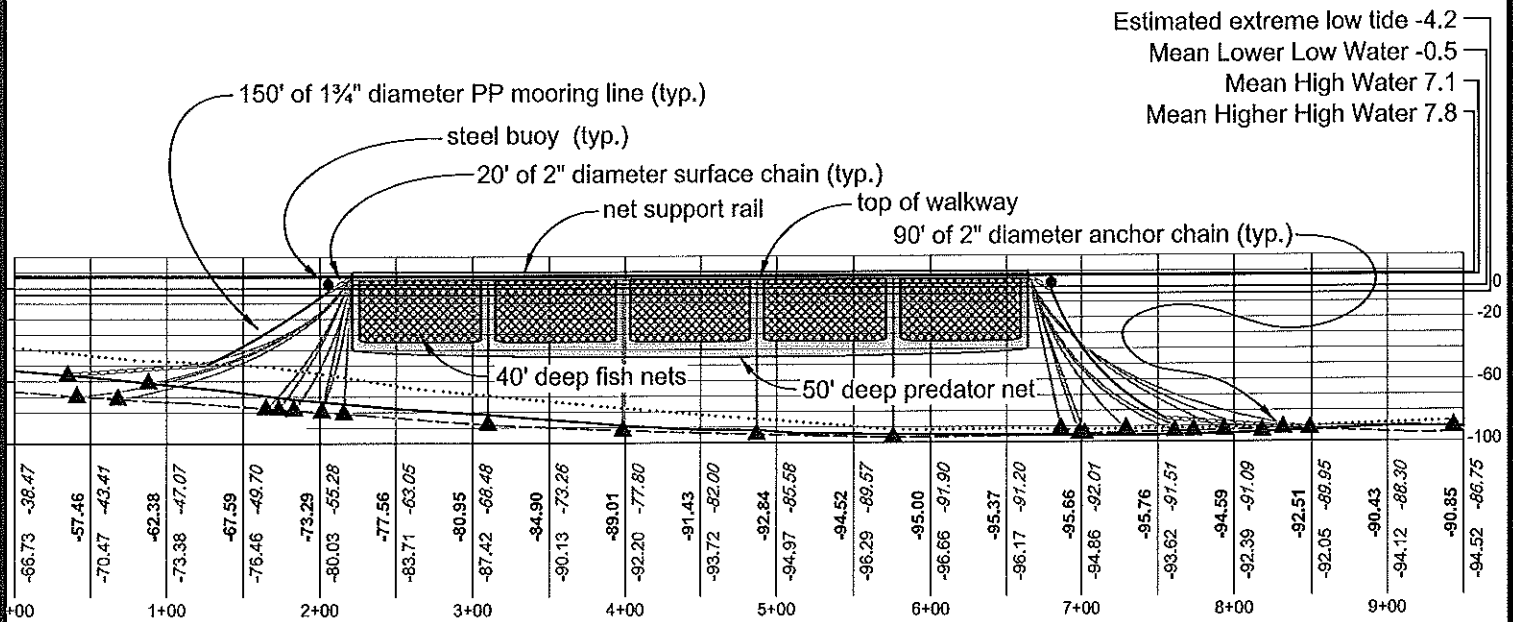
ADJACENT PROPERTY OWNERS:
Washington State

LOCATION: Deepwater Bay, Cypress Is-
land (3.5 miles north of Anacortes Ferry slip)
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PAGE 5 of 6 DATE: February 2, 2017

PROPOSED PROJECT: Replacement & Re-
positioning of Existing Site 2 Net Pen Facility

IN: Deepwater Bay
NEAR/AT: Anacortes
COUNTY: Skagit
STATE: WA

Profile View from Southeast



..... marine bed 125' northwesterly of centerline
 ——— marine bed at centerline
 ----- marine bed 125' southeasterly of centerline



SCALE: 1:1,500



2/2/2017

Tide level data relative to NAVD88 hereon are per the mean of NOAA/NOS values for Armitage Island and Swinomish, available in February, 2017. They are based on insufficient durations of observations to be of great accuracy.



NAVD88 1996
 WSDOT "GP29020-15A" & "Tracie"



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PROPOSED PROJECT: Replacement & Repositioning of Existing Site 2 Net Pen Facility

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